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EXAMINER				
PHAN, HANH				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/626,965

Applicant(s)

HOFMEISTER ET AL.

Examiner

Hanh Phan

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25, 27-32 and 37-42 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-9, 11-21, 23, 24, 27, 29, 31 and 37-42 is/are rejected.
7) ☒ Claim(s) 10, 22, 28, 30 and 32 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 25 May 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 01/09/2008.
2. The indicated allowability of claims 8, 9, 20, 21 and 27 is withdrawn in view of the newly discovered reference(s) to Klink (US Patent No. 5,706,277) and Kato et al (Pub. No.: US 2002/0021468). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 11-14, 23, 24, 29, 31, 37, 38, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al (US Patent No. 5,557,437) in view of Klink (US Patent No. 5,706,277).

Regarding claims 1, 23, 24 and 29, referring to Figure 1, Sakai et al teaches a transceiver for use in connecting a host with an optical network, the transceiver comprising:

an input port (i.e., input port receiving an electrical signal, Fig. 1) that receives electrical signals from a host, the input port being in communication with an optical transmitter (i.e., Electrical/optical converter 16, Fig. 1) for generating an optical signal for transmission to the optical network (i.e., col. 4, lines 49-67, col. 5, lines 1-67 and col. 6, lines 1-26);

an output port (i.e., output port for outputting an electrical signal, Fig. 1) that sends electrical signals to the host, the output port being in communication with an optical receiver (i.e., Optical/electrical converter 1, Fig. 1) that receives optical signals from the optical network and converts the optical signals into electrical signals (i.e., col. 4, lines 49-67, col. 5, lines 1-67 and col. 6, lines 1-26);

a loopback path (i.e., a loopback 24, Fig. 1) for selectively coupling an incoming electrical signal from the input port to the output port (i.e., col. 4, lines 49-67, col. 5, lines 1-67 and col. 6, lines 1-26).

Sakai differs from claims 1, 23, 24 and 29 in that he fails to specifically teach a pass-through port operable to send the incoming electrical signal to a device external to the transceiver and a pass-through path configured to bypass the optical transmitter in selectively coupling the incoming electrical signal from the input port to the pass-through port. However, Klink in US Patent No. 5,706,277 teaches a pass-through port operable to send the incoming electrical signal to a device external to the transceiver and a pass-through path configured to bypass the optical transmitter in selectively coupling the incoming electrical signal from the input port to the pass-through port (i.e., Figs. 1-3, col. 4, lines 39-67, col. 5, lines 1-67 and col. 6, lines 1-26). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the pass-through port operable to send the incoming electrical signal to a device external to the transceiver and a pass-through path configured to bypass the optical transmitter in selectively coupling the incoming electrical signal from the input port to the pass-through port as taught by Klink in the system of Sakai et al. One of ordinary skill in the art would have been motivated to do

this since allowing providing an improved optical line terminal for a network wherein the optical line terminal protects against network component failures.

Regarding claim 11, Sakai et al further teaches the loopback path is configured for diagnosing the operation of a host, the transceiver, and optical devices interconnecting the host and the transceiver (i.e., Fig. 1).

Regarding claims 12 and 31, referring to Figure 1, Sakai et al teaches a transceiver for use in connecting an optical network to a host, the transceiver comprising:

- an optical transmitter (i.e., Electrical /optical converter 16, Fig. 1) generating an optical output in response to an electrical input signal applied to an input of the optical transmitter;

- an optical receiver (i.e., Optical /electrical converter 1, Fig. 1) generating an electrical output signal at a receiver output in response to an optical input; and

- a loopback path (i.e., a loopback 20, Fig. 1) for selectively coupling the electrical output signal from the optical receiver (i.e., O/E converter 1, Fig. 1) to the input of the optical transmitter (i.e., (E/O converter 16, Fig. 1, col. 4, lines 49-67, col. 5, lines 1-67 and col. 6, lines 1-26).

Sakai et al differs from claims 12 and 31 in that he fails to teach a pass-through port operable to send the electrical output signal to a device external to the transceiver and a pass-through path configured to selectively couple the electrical output signal from the optical receiver to the pass-through port. However, Klink in US Patent No. 5,706,277 teaches a pass-through port operable to send the electrical output signal to a device external to the transceiver and a pass-through path configured to selectively

couple the electrical output signal from the receiver 106a to the pass-through port (i.e., Figs. 1-3, col. 4, lines 39-67, col. 5, lines 1-67 and col. 6, lines 1-26). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the pass-through port operable to send the electrical output signal to a device external to the transceiver and the pass-through path configured to selectively couple the electrical output signal from the receiver to the pass-through port as taught by Klink in the system of Sakai et al. One of ordinary skill in the art would have been motivated to do this since allowing providing an improved optical line terminal for a network wherein the optical line terminal protects against network component failures.

Regarding claim 13, Sakai et al further teaches the loopback path is configured for bypassing a transceiver output port and coupling the electrical output signal to the input of the optical transmitter (i.e., Fig. 1).

Regarding claim 14, the combination of Sakai et al and Klink teaches the loopback path is configured for diagnosing the operation of a remote host, the transceiver, and optical devices interconnecting the remote host and the transceiver (i.e., Fig. 1 of Sakai et al and Figs. 1-3 of Klink).

Regarding claims 37, 38, 41 and 42, the combination of Sakai et al and Klink teaches the transceiver is configured to be daisy-chained with another transceiver by way of the pass-through port (i.e., Figs. 1-3 of Klink).

5. Claims 2-9, 15-21, 25, 27, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al (US Patent No. 5,557,437) in view of Klink (US Patent No. 5,706,277) and further in view of Kato et al (Pub. No.: US 2002/0021468).

Regarding claims 2-7, 15 and 25, the combination of Sakai et al and Klink differs from claims 2-7, 15 and 25 in that it fails to teach an integrated chip with a post amplifier and laser driver. Kato teaches an integrated chip with a post amplifier and laser driver (i.e., Figs. 2 and 3, pages 3 and 4, paragraphs [0038]-[0048]). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the integrated chip with a post amplifier and laser driver as taught by Kato in the system of the combination of Sakai et al and Klink. One of ordinary skill in the art would have been motivated to do this since allowing providing increasing the power level of signal to a desired level and reducing size, weight and cost of the system.

Regarding claims 8, 9, 20, 21 and 27, the combination of Sakai et al, Klink and Kato teaches the receiver eye opener comprises at least one of a clock and data recovery, an RT, and a buffer; the transmitter eye opener comprises at least one of a clock and data recovery, an RT, and a buffer; and the loop back path passes through at least one of the at least one of a clock and data recovery, an RT, and a buffer on the receiver eye opener and the at least one of the at least one of a clock and data recovery, an RT, and a buffer on the transmitter eye opener (i.e., Figs. 2 and 3 of Kato, pages 3 and 4, paragraphs [0038]-[0048]).

Regarding claim 16, the combination of Sakai et al, Klink and Kato teaches the loopback path does not pass through the post amplifier or the laser driver (i.e., Fig. 1 of Sakai et al and Figs. 2 and 3 of Kato).

Regarding claims 17-19, the combination of Sakai et al, Klink and Kato teaches the loopback path passes through at least one of the receiver eye opener and the transmitter eye opener (i.e., Fig. 1 of Sakai et al and Figs. 2 and 3 of Kato).

Regarding claims 39 and 40, the combination of Sakai et al, Klink and Kato teaches the transceiver is configured to be daisy-chained with another transceiver by way of the pass-through port (i.e., Figs. 1-3 of Klink).

Allowable Subject Matter

6. Claims 10, 22, 28, 30 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to claims 1-25, 27-32 and 37-42 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

/Hanh Phan/

Primary Examiner, Art Unit 2613